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THE  
NATURAL HISTORY  
OF  
BRITISH INSECTS;  
EXPLAINING THEM  
IN THEIR SEVERAL STATES,  
WITH THE PERIODS OF THEIR TRANSFORMATIONS,  
THEIR FOOD, ECONOMY, &c.  
TOGETHER WITH THE  
HISTORY OF SUCH MINUTE INSECTS  
AS REQUIRE INVESTIGATION BY THE MICROSCOPE.  
THE WHOLE ILLUSTRATED BY  
COLOURED FIGURES,  
DESIGNED AND EXECUTED FROM LIVING SPECIMENS.

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BY E. DONOVAN.

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# P L A T E CCXXIV.

## PHALÆNA NUPTA.

### RED UNDERWING MOTH.

#### LEPIDOPTERA.

#### GENERIC CHARACTER.

Antennæ taper from the base : wings in general deflected when at rest. Fly by night.

#### SPECIFIC CHARACTER

#### AND

#### SYNONYMS.

Thorax crested : anterior wings cinereous, varied with brown : posterior pair red, with two broad black bands : abdomen hoary, beneath white.

PHALÆNA NUPTA cristata alis planis cinerascens : posticis rubris ; fasciis nigris, abdomine cano subtus albo. *Linn. Syst. Nat.* 2. 841. 119.  
*Wilks pap.* 33. tab. 1. a. 1.  
*Rees. Inf.* 1. phal. 2. tab. 15.

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The larva of the Red Underwing Moth feeds on the willow : it is found in that state in June and July. The Fly appears in August, after having remained in the pupa state about twenty-one days.

Collectors of English Insects enumerate near twenty species of *Phalæna* under the trivial distinctions of *yellow underwing*, *copper underwing*, *orange underwing*, *pink underwing*, &c. &c. Among these the most conspicuous both for beauty and magnitude, are the *red underwing*, and *crimson underwing*. The first is by no means uncommon in the winged state. The latter is very rare, or at least a local species: it is found in the larva state on the tops of the highest oaks in Richmond Park, and was formerly found in similar situations in Burnt Wood, Essex. We are not informed that it has been taken in any other part of this kingdom.

These two species have been confounded with a third sort that is found in some parts of Europe, but does not, we have every reason to conclude, inhabit this country. This is the *Noctua Pacta* of Linnæus and Fabricius. Linnæus himself, in the first editions of the *Systema Natura*, considered the Red Underwing Moth, figured by Roefel, tab. 15, as the *Phalæna Pacta*, and adds it in his Synonyms; but it appears corrected in the later editions\*.

After that time, Harris, in his *Aurelian*, and other works, called the *Red Underwing* *Phalæna Pacta*, and the *Crimson Underwing* *Phalæna Nupta*. And Dr. Berkenhout, following Harris, or inattentive to the express language of the author he translated, has made the same error in his *Synopsis of the Natural History of Great Britain*†. Indeed, it may be doubted, whether any later English work on Insects has detected the error; for, examining a little tract of Mr. Matthew Martin, of the Bath Society, published in 1785, we find the Red Underwing called therein *Phalæna Pacta*.

To place our remarks in a clear point of view, we need only quote the descriptions of Linnæus:—"NOCTUA PACTA Cristata alis griseiscentibus subundatis: posticis rubris; fasciis duabus nigris. Abdomine supra rubro." And again in the general description

\* Corrected after 1759.

† Not corrected in the last edition.







“*Abdomen supra rufum.*” Without adverting to the other characteristic marks, this proves that the Linnæan species of *Paeta* cannot be the same with that of the authors before quoted, because in their species the upper part of the abdomen is hoary, inclining to brown, and not red\*. Their *Phalæna Paeta* can be no other than the *Phalæna Nupta* of Linnæus and Fabricius; the precise species represented in our plate: of which Linnæus and Fabricius say: “*Habitat in Europæ Salice Vitellina;*” and of the *Phalæna Paeta* and *Sponsa*, “*Habitat in Europæ Quercu.*” The first lives on willows, the two others on oaks.

We close our remarks with observing, that the above quoted English authors have been no less mistaken as to *Phalæna Nupta*, which they have made the *Crimson Underwing* Moth. We have before expressed our doubt whether *Phalæna Paeta* has ever been found in this country;—we add, that the Insect, known to English collectors by the trivial name of *Crimson Underwing*, is the *Phalæna sponsa* of Linnæus and Fabricius†, and consequently not connected in the least with *Phalæna Nupta*.

The readers of the works of Harris, Berkenhout, &c. are requested to read

For *Phalæna Nupta*, *Phalæna Sponsa*, *Crimson Underwing* Moth.

For *Phalæna Paeta*, *Phalæna Nupta*, *Willow red Underwing* Moth.

And finally, remove *Phalæna Paeta* from the list of British species, till it is proved to be a native of this country.

\* Berkenhout says the abdomen is reddish above; but by this he only encreases the mistake; for his species agrees in every other respect with the *Willow* Moth, on which plant he also says it is found. Page 140. Vol. I.

† Vide *Entomologia Systematica*. Vol. III. p. 2. p. 53. 147.















## P L A T E CCCXXIV.

## P H A L Æ N A S P O N S A.

## CRIMSON UNDERWING MOTH.

## G E N E R I C C H A R A C T E R.

Antennæ setaceous. Wing deflexed when at rest. Fly by night.

## S P E C I F I C C H A R A C T E R

A N D

## S Y N O N Y M S.

Thorax crested. Anterior wings greyish, undulated, spotted with brown. Posterior pair crimson, with two black bars across. Abdomen grey.

P H A L Æ N A S P O N S A : crista, alis planis cinerascens fuscis undulatis; posticis rubris; fasciis duabus nigris, abdomine undique cinereo. *Linn. Syst. Nat.* 2. 841. 118. *Roef. Inf.* 4. tab. 19.

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In the description of *Phalæna Nupta*, we have offered some remarks on the *Sponsa*, *Nupta*, and *Pacta* of Linnæus and Fabricius; and have only to add in this place, that an accurate figure of *P. Pacta* is given in *Fueß. Archiv.* tab. 15. fig. 3. This figure is smaller than the species found in Great Britain, and in particular has the upper surface of the abdomen crimson, as authors have described it.

The

The Synonyms of the three species, as they stand in the works of Linnæus and Fabricius, are very incorrect. We venture to retain that to Roefel's plate, vol. 4. t. 19. in which the larva we have figured is given.

The Caterpillars feed on the tops of the highest Oaks, change to the pupa state in June, and appears a winged Insect early in the month following.









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## P L A T E CLXXI.

## PHALÆNA FRAXINI.

CLIFDEN NON-PAREIL.

LEPIDOPTERA.

## GENERIC CHARACTER.

Antennæ taper from the base. Wings in general deflexed when at rest. Fly by night.

*Noctua.*

Wings scalloped, grey, with transverse undulated bands of black, in the centre of the wing; second wings black, with a broad curved band of blue across the middle.

PHALÆNA FRAXINI: cristata, alis dentatis cinereo nebulosis: posticis supra nigris: fascia cærulescente.

*Lin. Syst. Nat.* 2. 843. 125.

*Fn. Sv.* 1165.

*Fab. Syst. Ent.* 602. 51.—*Spec. Inf.* 2.

221. 72.—*Ent. Syst. Nat. T.* 3. p. 2.

55. 152.

*Phalæna feticornis spirilinguis*, alis deflexis, superioribus cinereo fuscoque, undulatis, inferioribus nigris, fascia transversa cœrulea. *Geof. Inf.* 2.

151. 83.

*Roesf. Inf.* 4. tab. 28. fig. 1.

*Merian Europ.* tab. 46.

*Ammir. Inf.* tab. 25.

*Wilk. pap.* 45. tab. 1. a. 2.

*Eyest. Arch.* tab. 15. fig. 1. 2.

*Wien. Verz.* 90. 2.

From the English name given to this beautiful and extremely scarce moth, we learn that it has been taken at Clifden: we have also heard of its being found in other parts of England; and, if we can rely on our information, a specimen was taken in July, 1795, in the fields near Hoxton.

We have never understood that the larva had been found in this country. Feeds on the ash tree.











*T. L'Admiral, Jr.*  
*H. v. d. r. d. m.*



## P L A T E CLXXII.

THE  
C A T E R P I L L A R  
AND  
C H R Y S A L I S

OF  
*P H A L Æ N A F R A X I N I.*

---

The rarity of this subject must plead our apology for the liberty we have taken in introducing it into our work. It is the only instance in which we have given place to a copy from the works of others of any subject, however rare. We have in our possession a preserved specimen of the caterpillar of *Phalæna Fraxini*, sent from Germany; but as it is of that kind in which the colours and form cannot be preserved well, we have preferred giving an exact copy of the caterpillar as well as chrysalis, from the works of a respectable, but little known author, *Amiral*. This author appears to have been singularly fortunate in presenting a figure of the caterpillar, when the accurate Roefel did not publish a figure of the moth till his fourth volume, and was not then in possession of the caterpillar.

Some of our readers will be perhaps surprised to find that our figures precisely agree with those contained in the Aurelian of our countryman *Harris*; but whoever possesses the plates of *Amiral*, will find that in the most minute parts of *Harris's* plates, he has only traced and reversed the originals of *Amiral* throughout; and in many instances by a clumsy imitation, in reversing the foliage and flies, has even spoilt the effect, and lost sight of the accuracy of them.













## P L A T E CXXXIX.

## P H A L Æ N A M E T I C U L O S A.

ANGLE-SHADES MOTH.

LEPIDOPTERA.

## G E N E R I C C H A R A C T E R.

Antennæ taper from the base. Wings, in general deflexed when at rest. Fly by night.

\* *Noctua* antennæ like bristles in both sexes.

## S P E C I F I C C H A R A C T E R

A N D

## S Y N O N Y M S.

First Wings pale reddish colour, with a broad triangular brown spake in the middle. Second Wings palish, with dark waves; margin of both Wings indented.

*Phalæna Meticulosa.* *Linn. Syst. Nat.* 2. 845. 132.—*Fn. Sv.* 1164.

*Phalæna Meticulosa*: alis deflexis, eroso dentatis, pallidis, anticis basi incarnata, triangule fusco. *Fab. Syst. Ent.* 608. 78.

*Phalæna feticornis spirilinguis*, alis deflexis margine erosis cinereo fuscis, superioribus triangulo marginali fuscescente, incarnatum includente, thorace gibbo. *Geof. Inf.* 2. 151. 84.

*Merian. Europ. tab.* 24.

*Albin Inf. tab.* 13.

*Roef. Inf.* 4. tab. 9.

*Degeer Inf.* 1. tab. 5. fig. 14.

*Goed, Inf.* 1. tab. 56.

The *Phalæna Meticulosa* certainly exceeds many other Insects of the same tribe for elegance and simplicity: the variety of tints so delicately, indeed almost insensibly softened into one another, and neatness of the waves and lines interspersed over the whole, amply compensate for the defection of more gaudy colours. In the caterpillar state it is scarcely less deserving attention; the yellow specks on a beautiful, yet lucid green, have a very pleasing effect. The web it spins round its pupa is of a fine white colour, and silky texture; the pupa within of a blackish chocolate colour.

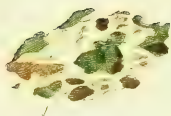
This species is sometimes met with in plenty, though less so in some seasons than in others; and not unfrequently is more abundant when the season appears most unfavourable. It feeds on nettles chiefly, but we have found it on several other plants; and once on a young oak, in Kent; the leaves of which we fed it on some time. In the caterpillar state it is found in April, changes to the pupa state in May, the Moth appears in June.











## P L A T E CXXXIII.

## P H A L Æ N A P S I.

## GREY DAGGER-MOTH.

## LEPIDOPTERA.

## GENERIC CHARACTER.

Antennæ taper from the base. Wings, in general deflexed when at rest. Fly by night.

Noctua, Antennæ fetaceous.

## SPECIFIC CHARACTER

## AND

## SYNONYMS.

First wings and body grey; on the former three or four black marks, in the form of a dagger\*. Second wings pale brown, with a slightly scalloped margin.

PHALÆNA PSI: cristata, alis deflexis cinereis, anticis lineola baseos characteribusque nigris. *Syst. Ent.* 614. 104.—  
*Fab. Spec. Inf.* 2. 235. 129.  
*Linn. Syst. Nat.* 2. 846. 135.  
*Alb. Inf. tab.* 26.

The Caterpillars of the Grey Dagger-Moth is frequently found on fruit trees; particularly on the cherry: it feeds also on the willow and poplar, and on almost all plants indiscriminately when confined in the breeding cage. It is not an uncommon Insect: the Caterpillars change in September, remain in the chrysalis state during winter, and the Moth appears late in May, or early in June.

\* Or like the Greek (ψ) Psi; from which it receives its specific name.





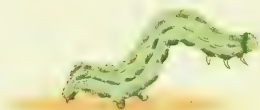












## P L A T E CXXXVII.

## PHALÆNA CHRYSITIS.

BURNISHED BRASS MOTH.

LEPIDOPTERA.

## GENERIC CHARACTER.

Antennæ taper from the Base. Wings in general deflexed when at rest. Fly by night.

NOCTUA.

Antennæ of both sexes filiform.

## SPECIFIC CHARACTER

AND

## SYNONYMS.

First Wings brown, with two transverse broad waves of greenish gold on each. Second Wings blackish grey. Wings margined.

PHALÆNA CHRYSITIS *Linn. Syst. Nat.* 2. 843. 126.

Noctua cristata, alis deflexis orichalceis, margine fasciaque griseis. *Syst. Ent.* 606. 69.—*Spec. Inf.* 2. p. 226. 91.  
—*Fabricius.*

*Phalæna feticornis spirilinguis*, alis deflexis ferrugineo fuscis, fascia duplici transversa viridi aurea. *Geof. Inf.* 2. 149. 97.

*Phalæna antennis filiformibus*, dorso cristato, alis deflexis griseis, fasciis duabus aureo viridibus. *Degeer. Inf. Vers. Germ.* 2. 1. 311. 2.

*Merian. Europ. tab.* 39.

*Albin Inf. tab.* 71. fig. a. b. c. d.

*Shæff. Icon. tab.* 101. fig. 2. 3.

The pencil can produce but a feeble and inadequate imitation of the metallic splendour of this beautiful, yet common Insect. The upper Wings have the appearance of fine burnished brassy, changeable in different directions of the light to green, brown, and rich golden hues; the under Wings are of a blackish colour, and serve as an admirable contrast to the more brilliant and varied tints of the upper Wings. The Thorax is crested.

*Berkenhout* has given a very false description of the Caterpillar of this Insect, he says it is "smooth, orange with white spots;" we think it necessary to note this error only as it may mislead young Collectors, who have no other assistant than his Synopsis, by which they can determine the Species, when in the Caterpillar state. It is astonishing how he could possibly be led into this error, when *Albin*, *Fabricius* \*, and all preceding authors on Entomology, have described it so plainly.

It feeds on Nettles, and other Plants, growing among the low herbage by the side of banks; in fine seasons there are generally two broods of them from May, to June in the following year; the first are found early in May in the Caterpillar state, appear in June in the winged state; Caterpillars are full fed again in July, the Moths come forth in August.

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\* *Larva solitaria, gibbosa, viridis albo striata. Fabricius.*









# P L A T E   X X X I I I .

## F I G .   I .

### P H A L Æ N A   B A T I S .

#### L E P I D O P T E R A .

#### P E A C H - B L O S S O M   M O T H .

\* *Noctua.*

#### S P E C I F I C   C H A R A C T E R

A N D

#### S Y N O N Y M S .

First wings fuscous, with five peach-coloured spots, the lower ones cinereous.

P H A L Æ N A   B A T I S : alis primoribus fuscis : maculis quinque incarnatis, posterioribus albidis. *Fabr. Sp. Inf. 2. p. 216. n. 42.*

Phalæna Noctua spirilinguis lævis, alis depressis : superioribus fuscis : maculis simul quinque albidis ; inferioribus albis. *Linn. Syst. Nat. xii. 2. p. 836. n. 97.*

The Peach-blossom Moth at first sight so evidently distinguishes itself, that it can scarcely be mistaken. The upper or first pair of Wings have the ground of a brown colour, which in some directions of light assume a golden appearance ; and on each Wing are five elegantly disposed spots of white, having each a center of the most beautiful bloom, or blossom colour, which blend into the white with the most exquisite softness. The under Wings are of a simple colour, and have only a transverse shade of a darker hue across the middle of each Wing.

Its



Its truly elegant appearance would alone be sufficient to claim our attention ; but when we add that it is one of the rarest and most valuable specimens of British entomology, it will be considered as a compensation for those more common subjects occasionally introduced ; and which the nature of our plan cannot permit us to refuse inserting.

Our endeavours to procure the Caterpillar have hitherto been ineffectual, although it is very probably to be taken early in the season, feeding on the bramble. It is described to be a brown larva, naked, or without hairs, with a conic gibbosity or rising on all the middle segments of the back, and one larger than the rest with a double pointed tip, towards the anterior part or head.

Our Fly was taken in Essex, July 14th. Has been met with in Combe wood.

---

F I G. II.

PHALÆNA AMATORIA.

BLOOD VEIN, or BUFF ARGOS MOTH.

\* *Geometra.*

Wings pale, powdered with brown, with a straight purple line, and fuscous obsolete streak behind.

PHALÆNA AMATORIA: alis pallidis pulverulentis: fascia purpurea recta strigaeque fusca repanda. *Linn. Fn. Suec.* 1223.—*Fabr. Sp. Inf.* 2. p. 242. n. 10.

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The Caterpillars of this Phalæna feed on the oak leaves. They are green, with yellow rings. The Fly is found in Essex very commonly in the month of July.









## P L A T E XLVI.

## P H A L Æ N A F E S T U C Æ.

## G O L D S P O T M O T H.

## LEPIDOPTERA.

## G E N E R I C C H A R A C T E R.

Spiral Trunk; Back smooth, without Crest.

## S P E C I F I C C H A R A C T E R.

First Wings brown, with two gold-silver spots on each. Second Wings and Abdomen pale brown. Head, Antennæ and Thorax bright orange brown.—*Syst. Ent.* 607. 71.—*Linn. Syst. Nat.* 2. 845. 131.—*Fn. Sv.* 1170.—*Degeer Inf. Vers. Germ.* 2. 1. 312. 3.—*Albin. Inf. Tab.* 84. *Fig.* G. H.—*Wilks Pap.* 8. *Tab.* 1. a. 17.—*Acta Holm.* 1748. *Tab.* 6. *Fig.* 3. 4.—*Kleman. Inf.* 1. *Tab.* 30. *Fig.* A.

---

The Caterpillars which are smooth, and of a plain green colour, are found on such plants as grow in ditches, or fenny situations.—The *Sisymbrium Nasturtium*, *Water Cress*, is its common food, but it will devour with avidity most aquatic vegetables, particularly the *Festuca Fluitans*, *Floating Fescue Grass*. It is esteemed one of the rarest Species of *Phalænæ* we have in this country, its elegant form and rich colouring determines it also one of the most beautiful. Near

London it has been sought with most success in the Battersea Fields, or on those banks which abound with aquatic plants, between Battersea and Richmond; the marshes in the vicinity of Deptford and Rotherhithe have been yet more productive; we do not however understand that any have been taken this season about the metropolis.

The very singular manner in which this Caterpillar constructs its web, deserves particular notice: previous to its transformation from the *Larva* to the *Aurelia*, it quits the tender plants which afford nourishment, and retires to those, better calculated for its protection, in its defenceless state; its choice is generally the *Scirpus Lacustris* (*Bull Rush*), or the stoutest plant that is near, if its leaves are rushy and strong. Its first process is to make a deep incision across the leaf, which it effects with little labour, as its mouth is well armed for the purpose; the upper part of the leaf being thus deprived of its support, instantly becomes dependent; the Caterpillar embraces the two surfaces of the fractured leaf, and weaves its web between. The web is of an exquisite texture and whiteness, and bears great resemblance to the webs of some spiders that frequent watery places.

The Caterpillars are found in June and July, the Fly in August.











# P L A T E CCLXV.

## PHALÆNA IOTA.

GOLDEN *i* MOTH.

LEPIDOPTERA.

### GENERIC CHARACTER.

Antennæ taper from the base : wings in general deflected when at rest. Fly by night.

### SPECIFIC CHARACTER

AND

### SYNONYMS.

Thorax crested : anterior wings ferruginous grey, with an inverted golden *i* in the centre.

PHALÆNA IOTA: cristata alis deflexis, anticis ferrugineo griseis I refupinato aureo inscriptis. *Fab. Syst. Ent.* 608. 76.  
—*Sp. Inf. T.* 2. p. 228. 98.—*Ent. Syst. T.* 3. p. 81.  
*Sp.* 237.

PHALÆNA IOTA: alis primoribus ferrugineo-griseis, I refupinato aureo inscriptis. *Gmel. Syst. Nat.*—*Ent. p.* 2557. 130.  
*Roef. Inf.* 1. *phal.* 3. *tab.* 5.

---

Linnæus very accurately described this Insect under the specific name *Iota* in the early edition of the *Systema Naturæ*. It is given as a native of Germany, and without a reference to any figure. Fabricius has followed the same description throughout all his works,

\* E

without

without noticing any figure of it also, until the *Entomologia Systematica* appeared, when a reference is given to *tab. 5. Phal. 3. Vol. I.* of Roefel's *Insects*. This is however erroneous, for Linnæus includes that reference among the Synonyms of his *Phalæna Gamma*, and Gmelin, his latest editor, continues the same amongst the Synonyms of *Gamma* likewise. Klemann, who revised the last edition of Roefel's work, is decidedly of opinion, that the figure is that of *Gamma*, and assigns the Linnæan specific name to it accordingly. Whatever reason influenced the opinion of Fabricius, that the figure in question was the true *Phalæna Iota* of Linnæus, when that author himself says otherwise, is not mentioned by Fabricius, and is by no means clear to us: but one circumstance cannot escape observation: Fabricius has in no instance referred to the figure in Roefel's plate before the publication of his last work, though all the other Synonyms of *Phalæna Gamma* are the same in every edition of the Fabrician systems as in those of his predecessor, Linnæus.

This Insect is very beautiful, and far more uncommon than the following species. It is found on the common, and white dead nettles, or archangel. The larva has twelve feet; is without hairs, green; and spotted with white. The Moth appears in June.

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## FIG. II.

### PHALÆNA GAMMA.

#### COMMON γ MOTH.

#### SPECIFIC CHARACTER

#### AND

#### SYNONYMS.

Thorax crested: anterior wings dentated, with a golden γ in the centre.

PHALÆNA





PHALÆNA GAMMA: cristata alis deflexis dentatis: anticis fuscis γ aureo inscriptis. *Linn. Syst. Nat.* 2. 843. p. 127.

*Fab. Ent. Syst. T.* 3. p. 79. sp. 228.

PHALÆNA GAMMA: alis primoribus fuscis γ aureo inscriptis. *Gmel. Linn. Syst. Nat.—Ent.* 2555. sp. 127.

*Geoff. Inf.* 2. 156. 92.

*Goed. Inf.* 2. t. 21.

*Rag. Inf.* p. 163. n. 16.

*Petiv. Gazoph.* 4. 6.

*Schæff. Icon. tab.* 84. fig. 5.

*Frisch. Inf.* 5. 15.

*Reaum. Inf.* 2. tab. 26. fig. 5.

*Albin. Inf. tab.* 79. fig. G. H.

*Sepp. Inf.* 5. tab. 1. 61.

Phalæna Gamma is one of those species which feed indifferently on many kinds of plants. It is often found amongst nettles and other low herbage, or in gardens amongst cabbages, &c. It is of a green colour, with pale or whitish longitudinal stripes on the back, and the sides yellow. The Moth is found in August and September.













## P L A T E CCXVI.

## PHALÆNA LIBATRIX.

HERALD MOTH.

LEPIDOPTERA.

## GENERIC CHARACTER.

Antennæ taper from the base : wings in general deflected when at rest. Fly by night.

## SPECIFIC CHARACTER

AND

## SYNONYMS.

Thorax crested : wings deflected, varied with red and grey ; edges deeply ferrated or indented : anterior pair with two white dots.

PHALÆNA LIBATRIX : cristata alis incumbentibus dentato erosi rufo. griseis : punctis duobus albis.—*Lin. Syst. Nat.* 2. 831. 78.—*Fn. Sv.* 1143.

*Fab. Ent. Syst.* 1. 3. p. 264. 181.

*Wien. Verz.* 62. 1.

*Geoff. Inf.* 1. 121. 26.

*Goed. Inf.* 1. tab. 67.

*Albin. Inf. tab.* 32. fig. 50.

*Schæff. Icon. tab.* 24. fig. 1. 2.

*Roef. Inf.* 4. tab. 20.

*Harris Inf. tab.* 1. fig. C. D.

*Pod. Inf.* 92. tab. 2, fig. 9.

The Caterpillar of this Insect is generally found under the bark of the willow and fallow, or on the rose. It is probable there are two broods of it in the year, being sometimes taken in the winged state early in the summer, but more commonly in the month of October; this is the more likely, as the English Aurelians first called it the Herald, from an idea that its appearance warned them of approaching winter.

This Insect remains about twenty-eight days in the pupa state, the Caterpillar not being found till the beginning of September.











# P L A T E CCVIII.

## PHALÆNA FIMBRIA.

BROAD-BORDERED YELLOW UNDERWING MOTH.

LEPIDOPTERA.

### GENERIC CHARACTER.

Antennæ taper from the base: wings in general deflected when at rest. Fly by night.

### SPECIFIC CHARACTER

AND

SYNONYMS.

NOCTUA.

Thorax crested: anterior wings clay colour, marked with obscure bands or streaks: posterior pair reddish orange, with a broad bar of black.

PHALÆNA FIMBRIA: cristatata alis planis griseo fasciatis; posticis helvolis: macula lineari atra. *Linn. Syst. Nat.* 2. 842. 123.—*Fab. Ent. Syst. T.* 3. p. 2. 59. 165.  
*Wien. Verz.* 87. 18.  
*Schreb. Inf. fig.* 9.

---

This rare Insect is distinguished from two very common species that are allied to it, by the broad border of black on the under wings, as its trivial name implies. In the larva state, it is one of that kind collectors denominate under-ground feeders: subsisting chiefly on the roots of grass, and never coming out of the ground till the evening, for which reason it is very rarely taken.

The

The Moth is very delicate in its appearance; the Caterpillar quite plain. Our specimen changed to crysalis early in May, and produced the Moth in the middle of June.

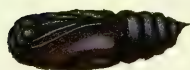
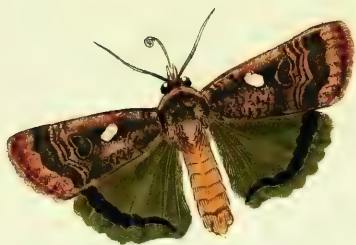
Fabricius was not informed that it was a native of this country, as appears by his last work, in which he describes it only as a native of Germany.











## P L A T E   C C C X I.

## P H A L Æ N A   P R O N U B A.

Y E L L O W   U N D E R W I N G   M O T H.

## G E N E R I C   C H A R A C T E R.

Antennæ taper from the base. Wings in general deflexed when at rest. Fly by night.

## S P E C I F I C   C H A R A C T E R

A N D

## S Y N O N Y M S.

Thorax crested. Wings incumbent. First pair variegated brown and grey. Second pair yellow, with a black band near the margin.

P H A L Æ N A   P R O N U B A : cristata, alis incumbentibus, posticis rubris, fascia atra submarginali. *Fab. Syst. Ent.* 603. 55.  
—*Sp. Inf.* 2. p. 222. 73.

Phalæna pronuba. *Linn. Syst. Nat.* 2. 842. 121.—*Fn. Sv.* 1167.

Phalæna antennis setaceis, alis brunneis aut cinereis, posticis luteis, fascia maginali nigra. *Degeer. Inf. Vers. Germ.* 2. 1. 288. 1.

*Goed. Inf.* 1. tab. 14.

*Frisch. Inf.* 4. tab. 32.

*Ammiral. tab.* 8.

*Schæff. Icon. tab.* 196. fig. 1. 2.

*Geoffr. Inf.* 2. 146. 76.

The larva of this beautiful, though common Moth, is found in the month of May, feeding on the roots of grafs, &c. &c. ; changes to the pupa, and appears in the winged state in August.









## P L A T E CCCXLIII.

## F I G. I.

## P H A L Æ N A J A N T H I N A.

ORANGE UNDERWING MOTH.

## G E N E R I C C H A R A C T E R.

Antennæ taper from the base. Wings in general deflexed when at rest. Fly by Night.

## S P E C I F I C C H A R A C T E R

AND

## S Y N O N Y M S.

Thorax crested. First wings incumbent, grey, variegated with brown, and marks of white. Second pair black with a large orange spot in the middle, and an exterior border of the same colour.

P H A L Æ N A J A N T H I N A : cristata alis incumbentibus griseis : litura albida, posticis atris : macula media margineque ferrugineis. *Fab. Ent. Syst. T. 3. p. 2. p. 59. sp. 166.*

Phalæna Janthina. *Wien. Verz. 78. 9.*

Phalæna Domiduca. *Fuessl. Arch. 3. tab. 16.*

Found in Darent Wood in the month of July. The larva is said to be white, with undulated brown streaks, and spotted next the posterior part with black.



## F I G. II.

## P H A L Æ N A O R B O N A.

PALE YELLOW UNDERWING MOTH.

## S P E C I F I C C H A R A C T E R

AND

## S Y N O N Y M S.

Thorax crested. First wings incumbent, liver-colour, with obscure spots. Second wings yellow, with a brown lunar mark in the middle, and a band of the same colour near the posterior margin.

P H A L Æ N A O R B O N A : cristata alis incumbentibus hepaticis : posticis flavis ; lunula strigaeque postica fuscis. *Fab. Ent. Syst. T. 3. p. 2. p. 57. sp. 158.*

---

This species is far less frequent than the *Phalæna Pronuba*, to which, at first glance, it bears some resemblance. Fabricius describes it as a native of Germany, and it does not occur in the Works of any Author as a British Insect.





## FIG. III.

## P H A L Æ N A A R B U T I.

## S P E C I F I C C H A R A C T E R.

Thorax crested. Wings deflexed, brown; posterior pair black, with a yellow band across the middle.

P H A L Æ N A A R B U T I : cristata alis deflexis fuscis: posticis nigris flava. *Fab. Ent. Syst. T. 3. p. 2. p. 126. sp. 380.*

---

Described by Fabricius in his last Work as an English Insect, from which we may infer, that it is not common in other parts of Europe.

THE UNIVERSITY OF CHICAGO

PHYSICS DEPARTMENT  
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NO. 100

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BY J. J. KATZ AND R. L. JONES











# P L A T E CCXXI.

## PHALÆNA MYRTILLI.

SCARCE BROAD BORDER YELLOW UNDERWING MOTHS.

LEPIDOPTERA.

### GENERIC CHARACTER.

Antennæ taper from the base. Wings in general deflexed when at rest. Fly by night.

### SPECIFIC CHARACTER

AND

### SYNONYMS.

Thorax crested. Wings deflexed, brown, spotted with white. Anterior wings yellow, with a deep black border.

PHALÆNA MYRTILLI cristata alis deflexis ferrugineis albo maculatis: posticis luteis, fascia lata submarginali nigra. *Lin. Syst. Nat.*—*Fab. Ent. Syst. T. 3. p. 2. 126. 379.*

A small Insect, but of singular beauty; it feeds on the whortle berry and floe.

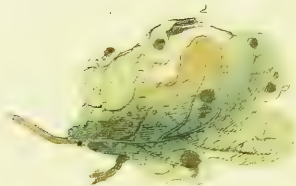
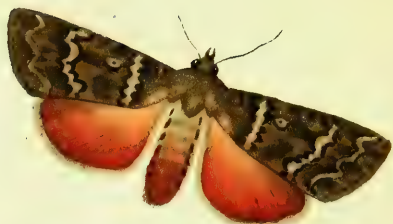
This species has been taken by Mr. Crow, of Faversham. The only specimen we ever met with, was found in the caterpillar state, in Kent, in the month of May. The Fly came forth in June.











## P L A T E CXIII.

## PHALÆNA PYRAMIDEA.

COPPER-UNDERWING MOTH.

LEPIDOPTERA.

## GENERIC CHARACTER.

Antennæ taper from the base : wings in general deflected when at rest. Fly by night.

## SPECIFIC CHARACTER

AND

## SYNONYMS.

Anterior wings dark brown, with three waved repandate stripes of yellowish : posterior pair coppery ferruginous.

PHALÆNA PYRAMIDEA. *Noctua cristata*, alis fuscis, frigis tribus undatis flavescentibus repandis, posticis ferrugineis. *Linn. Syst. Nat.* 2. 856. 181.—*Fab. Spec. Inf.* 2. 232. 119.—*Ent. Syst. I. 3. p.* 2. 98. 290.

*Phalæna feticornis spirilinguis*, alis deflexis, superioribus fuscis, lineis transversis undulatis nigris, inferioribus ferrugineis. *Geoff. Inf.* 2. 160. 99.

*Phalæna media*, alis longis angustis, exterioribus linealis et areolis nigris, albis atro rubentibus transversis pulcre depictis, interioribus obscure rubris. *Raj. Inf.* 159. 9.

---

The singular pyramidal protuberance on the posterior part of the Caterpillar has furnished an excellent trivial name for this species. It is found on the Oak, Sallow, and Blackthorn in May ; changes

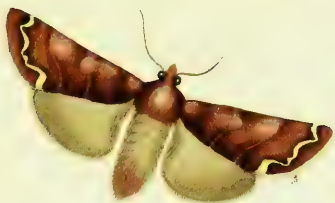


to the pupa state the first week in June ; the Moth comes forth in July. The Caterpillar spins a fine white filken web between two or three leaves in the manner represented in the plate at Fig. 1. Fig 2, the chrysalis, which the web envelopes. *Phalæna Pyramidea* is not a common species in this country.









## P L A T E    L I.

## P H A L Æ N A    P I S I.

## B R O O M    M O T H.

## L E P I D O P T E R A.

## G E N E R I C    C H A R A C T E R.

Antennæ taper from the base. Wings, in general, contracted when at rest. Fly by night.

*Noctua.*

## S P E C I F I C    C H A R A C T E R.

First wings red brown, clouded with dark brown, two spots in the centre, and a pale yellow undulated line near the exterior margin. Second wings and abdomen light brown with a broad shade of a greyish colour.

*Syst. Ent.* 610. 88.—*Lin. Syst. Nat.* 2. 854. 172.—

*Fn. Sv.* 1206.—*Degeer. Inf. Vers. Germ.*

2. 1. 322. 10.

*Raj. Inf.* 160. 10.

*Wilks pap.* 4. *Tab.* 1. a. 7.

*Roef. Inf.* 1. *Phal.* 2. *Tab.* 52.

*Merian. Europ. Tab.* 50.

The Caterpillars will devour indiscriminately the leaves of the knot-grass, of pease, the broom, &c. it is from the latter food, the Moth receives its name. The Caterpillars are found in July and

August, and descend into the ground late in September or the first week in October, and the Fly comes forth in July.

Caterpillars that enter the earth in the larva form, pass to the chrysalis, and issue forth in the perfect or Fly state, have no occasion for a web to protect them ; and therefore few species prepare one. But among those which remain exposed in the open air, a very small proportion neglect to weave a web with the utmost skill and industry ; the least attentive to this apparently necessary precaution are the Papiliones, who, often regardless of their situations, are found [in chrysalis] suspended against walls, the trunks, or branches of trees, and even paleings in very public roads.











## P L A T E L X I.

## P H A L Æ N A S T R A M I N E A.

## L E P I D O P T E R A.

## G E N E R I C C H A R A C T E R.

Antennæ taper from the base. Wings, in general, contracted when at rest. Fly by night.

## N O C T U A.

## S P E C I F I C C H A R A C T E R.

Antennæ and tongue deep yellow. Head and thorax covered with long hairs; which, with the superior wings, are pale yellow, or bright clay colour; in the middle of the superior wing is a kidney-shaped spot of dull grey, enclosed by a dark reddish brown line, which is united to the anterior margin by another spot of the same colour. Near the exterior margin is a broad obsolete band of pale brown, but where it touches the anterior margin it is darker; within this band are nine white spots, or points, and between the band and exterior margin of the wing, on the lower edge, is a bright black point; there are several other reddish brown points scattered upon the upper wing, near the base. The inferior wings are of a yellowish-white, with a shade of purple, a dark spot on the middle, and a pale black, broad border, with a white fringe.

---

This elegant species of the *Noctua* division of Moths, appears to be not only a nondescript, but altogether unknown before; even to the best practical entymologists: That an insect of such magnitude should have been unnoticed by *Linnaeus*, or *Fabricius*, is not very singular, as several nondescripts of a similar, and many of an inferior,

size, are to be seen in almost every cabinet; but that the species should have escaped the researches of the most eminent collectors, is rather astonishing.

We have sought every information which our connection would permit; and from the result we scarcely hesitate to pronounce the insect of a nondescript species, and our specimen to be perfectly unique; at least it is a newly-discovered acquisition to many scientific entymologists.

The original, whence the figure has been copied, is in the collection of the author; it was taken in a lane leading immediately from the wood at *Tottenham*, the last week in June, 1793. It was discovered in the evening, on a blade of grass; and, from its wet appearance, as well as exquisite preservation, it had certainly just emerged from its chrysalis.

The Caterpillar may be supposed to be an underground feeder, and to subsist on the roots of grass, &c. or one of that kind which comes only above the surface of the earth in the night.











## P L A T E CCXCVIII.

## PHALÆNA TRIPLACIA.

SPECTACLE MOTH.

## GENERIC CHARACTER.

Antennæ taper from the base. Wings in general deflexed when at rest. Fly by night.

\* \* *Noctua*.

## SPECIFIC CHARACTER

AND

## SYNONYMS.

Thorax crested. Wings deflexed; first pair greyish, with a double ferruginous arch; at the base, and another in an opposite direction near the apex.

PHALÆNA TRIPLACIA: critata alis deflexis; anticis arcu duplici contrario maculisque tribus glaucis intermediis. *Linn.*

*Syst. Nat.* 2. 854. 175.—*Fn. Sv.* 1202.

*Fab. Ent. Syst. T.* 3. p. 2. 117. 354.

*Degeer. Inf.* 1. tab. 6. fig. 20. 21.

*Merian. Europ. tab.* 97.

---

This Insect is remarkable for a fanciful kind of marking that encircles the eyes, and seems to resemble a pair of spectacles. It is found in the winged state the fourth week in June.

















# PLATE CCXCIX.

PHALÆNA ROBORIS.

GENERIC CHARACTER.

Antennæ taper from the base: wings in general deflected when at rest. Fly by night.

\* \* *Noctua*.

SPECIFIC CHARACTER

AND

SYNONYMS.

Wings deflected, greyish: two undulated white waves across the anterior pair: a white space in the middle, having a lunar black mark in its center.

PHALÆNA ROBORIS: lævis alis deflexis cinereis: frigis duabus undatis albis, macula centrali nivea: lunula nigra.  
*Fab. Ent. Syst. 3. p. 2. p. 35. sp. 90.*

---

A scarce species; it is found on the nut-tree.











## P L A T E   CCCIV.

## P H A L Æ N A   A B I S I N T H I I .

WORMWOOD MOTH.

## G E N E R I C   C H A R A C T E R .

Antennæ taper from the base. Wings in general deflexed when at rest. Fly by night.

\* *Noctua*.

## S P E C I F I C   C H A R A C T E R

A N D

## S Y N O N Y M S .

Thorax crested. Wings deflexed: white, fasciated and spotted with black in a somewhat quadrangular manner.

P H A L Æ N A   A B I S I N T H I I : crista alis deflexis canis: faciis punctisque in tetragonum positis nigris. *Linn. Syst. Nat.* 2. 845. 133.—*Fn. Sv.* 1182. *Fab. Ent. Syst.* T. 3. p. 2. p. 88. *fp.* 261.

---

Phalæna Abisinthii is certainly an elegant species, and particularly interesting as a native of this country. A few years since it was very highly esteemed by collectors of English natural history, and at present it holds a distinguished rank amongst the more valuable insects of our cabinets. Has been found on some wormwood in Bunhill-fields, about twenty years ago.



The larva is beautifully variegated with red, and tender shades of green and yellow on a whitish ground; it feeds on the wormwood, and becomes a pupa within a case, or spinning. Found in the winged state in July.









## P L A T E    C C C X V I I .

## P H A L Æ N A   P E R S I C A R I Æ .

## G E N E R I C   C H A R A C T E R .

Antennæ taper from the base.    Wings in general deflexed when at rest.    Fly by night.

## S P E C I F I C   C H A R A C T E R

A N D

## S Y N O N Y M S .

Thorax crested, wings deflexed, dark and clouded.    A white kidney-shaped spot, with a yellow lunar pupil in the middle on each.

P H A L Æ N A   P E R S I C A R I Æ :   crista alis deflexis fusco nebulosis: stigmatate reniformi albo ; pupilla lunari flava.    *Linn. Syst. Nat.* 2. 847. 142.—*Fn. Suec.* 1208.  
*Geoff. Inf.* 2. 157. 94.  
*Ammir. Inf. tab.* 157.  
*Roef. Inf. I. phal.* 2. tab. 30.

---

A very common insect ; and is often observed near fruit trees.













P L A T E CCLVII.

P H A L Æ N A V E R B A S C I .

WATER BETONY MOTH.

LEPIDOPTERA.

G E N E R I C C H A R A C T E R .

Antennæ taper from the base : wings in general deflected when at rest. Fly by night.

S P E C I F I C C H A R A C T E R

AND

S Y N O N Y M S .

Thorax crested : wings deflected and deeply ferrated at the margins : posterior edge of the first wings with a dark brown streak.

P H A L Æ N A V E R B A S C I : cristata alis deflexis dentato erosis : margine laterali fusco immaculato. *Linn. Syst. Nat.* 2. 850.

*Fn. Sv.* 118.

*Fab. Ent. Syst. Nat. T. 3. p. 2.* 120. *Sp.* 363.

*Wien. Verz.* 73. 8.

*Raj. Inf.* 168. 25.

*Geoffr. Inf.* 2. 158. 96.

*Sulz. Hist. Inf. tab.* 22. *fig.* 7.

*Reaum. Inf.* 1. *tab.* 43. *fig.* 9. 11.

*Frisch. Inf.* 6. *tab.* 9.

*Merian. Europ.* 3. *tab.* 29.

The Water Betony Moth is a very abundant species ; the larva feeds on the Moth Mullien, or Water Betony plant, as its name implies. It is in the larva state in July, becomes a pupa, and the fly is produced in April.

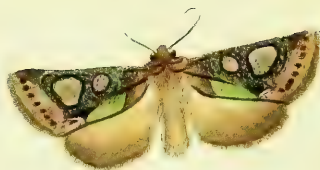












## P L A T E CLXV.

## PHALÆNA OXYACANTHÆ.

EALING'S GLORY.

LEPIDOPTERA.

## GENERIC CHARACTER.

Antennæ taper from the base. Wings in general deflexed when at rest. Fly by night.

*Noctua:*

## SPECIFIC CHARACTER

AND

## SYNONYMS.

First wings, dark brown, with two large irregular spots of white and reddish colour, and a broad space of the same next the exterior margin: in several parts a speckling of fine blueish green. Second wings, and body, plain brown.

PHALÆNA OXYACANTHÆ: cristata alis deflexis bimaculatis: margine tenuiori coerulescente; lunula alba.

*Lin. Syst. Nat.* 2. 852. 65.—*Fn. Sv.* 1207.

*Fab. Spec. Inf.* 2. 232. 114.—*Ent. Syst. Tom.*

3 pars. 2. p. 93. 277.

*Wien. Verz.* 70. 3.

*Roes. Inf.* 1. phal. 2. tab. 33.

*Wilks. pap.* 12. tab. 1. c. 1.

The caterpillar of this species is found on the White Thorn, in April; in May it becomes a pupa: the moth does not appear before September.

It will be readily conjectured, from its English name, to be more frequently taken about *Ealing*, in *Middlesex*, than elsewhere, though it is not peculiar, like some insects, to one place only. The caterpillar is smooth, or without any hairs; it eats ravenously, is very sluggish, and forms a fine silky web, in the ground, in which it passes to the pupa state\*. We find the moth very liable to variation in colours; in some specimens the green is very brilliant, in others the red; and again, in others, the lunar white marks are very conspicuous. In some specimens, natives of warm countries, we have seen them finer coloured than those from the northern parts of Europe

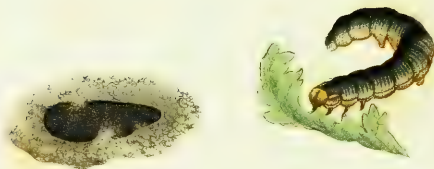
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\* In the plate of this species in Roel's German Insects, the silky cone of the pupa is drawn in the convex part of a leaf.









## P L A T E CLXVIII.

## P H A L Æ N A S A T E L L I T I A.

SATELLITE MOTH.

LEPIDOPTERA.

## G E N E R I C C H A R A C T E R.

Antennæ taper from the base. Wings in general deflexed when at rest. Fly by night.

Noctua.

## S P E C I F I C C H A R A C T E R.

A N D

## S Y N O N Y M S.

First wings, exterior margin indented: reddish brown with several dark streaks across: in the center a yellow spot between two smaller white spots. Second wings greyish.

P H A L Æ N A S A T E L L I T I A : cristata alis deflexis dentatis brunneis : anticis puncto flavo inter punctula duo alba. *Fab. Spec. Inf.* 2. 230. 104. *Lin. Syst. Nat.* 2. 855. 176. *Roef. Inf.* 3. tab. 50.

---

The caterpillar of this moth feeds on whitethorn, currant and gooseberry-trees, &c. The chrysalis or pupa is enclosed in a strong web of a greyish colour; it is of a dark brown colour. The caterpillar is found in June. In July or August, the moth comes forth.

The upper wings of this moth have a very striking characteristic; that is, the yellowish lunar mark within two small spots: from this character it has been aptly named *Satelliti*; and in English, the *Satellite Moth*.













# P L A T E CLXXIX.

PHALÆNA OO.

HEART MOTH.

LEPIDOPTERA.

## GENERIC CHARACTER.

Antennæ taper from the base. Wings in general deflexed when at rest. Fly by night.

NOCTUA.

Antennæ like a bristle.

## SPECIFIC CHARACTER

AND

## SYNONYMS.

Wings buff, streaked, and marked with red-brown, and a double o in the middle of the upper wings.

NOCTUA Oo: cristata alis deflexis cinerascens ferrugineo strigosis oo notatis. *Lin. Syst. Nat.* 2. 832. 81.—*Fn. Sv.* 1139.

*Fab. Syst. Ent.* 1. 3. p. 2. 247.

*Wien. Verz.* 87. 1.

*Roef. Inf.* 1. *Phal.* 2. tab. 63.

---

This Moth is far from common. It is found on the oak; in the Caterpillar state, late in the summer; changes to chrysalis in the first week

week of October; the fly appears late in April, or early in May. *Harris* greatly mistook the meaning of *Linnaeus*, when he says, "Linnæan name, *Sphinx* Oo."











# PLATE CCCCVI.

## PHALÆNA CHI.

CHI MOTH.

LEPIDOPTERA.

*Noctua.*

GENERIC CHARACTER.

Antennæ gradually tapering from the base to the tip: wings in general deflected when at rest. Fly by night.

SPECIFIC CHARACTER

AND

SYNONYMS.

Wings hoary grey: anterior pair marked with a black  $\chi$ .

PHALÆNA CHI: alis canis: superioribus  $\chi$  nigro notatis. *Linn. Fn. Suec.* 1180.

NOCTUA CHI: *Fabr. Spec. Inf.* 2. p. 236. n. 130.—*Mant. Inf.* 2. p. 174. n. 258.—*Ent. Syst. T.* 3. p. 2. p. 107. n. 321.

Phalena feticornis spirilingius, alis deflexis, superioribus cinereo fuscoque nebulosis, lineis undulatis et omicro nigris, inferioribus cinereis. L'OMICRON NÉBULEUX *Geoffr. Inf.* 2. p. 156. n. 93.

*Albin Inf.* t. 83. f. C. D.

*Roe. Inf.* 1. *Phal.* 2. t. 13.

F 2

During

During one of our summer excursions through the northern parts of the principality of Wales, we discovered by accident a solitary specimen of *Phalæna Chi*, resting among the lichens that encrust the side of that venerable memorial of Druidical antiquity, the larger *Cromlech*, at *Plas Newydd* in the isle of Anglesea. We observed it in a perfectly quiescent state, apparently just as it had emerged from the pupa in the open day time. This was on the 17th day of August: we conceive it requisite to mention this precisely, as the time of its appearance in the winged state has been stated by one writer to be July instead of August, and that on the authority of the individual specimen above mentioned\*.

An erroneous reference among the Fabrician synonyms of *Phalæna Chi*, to the work of Albin (Plate 83), had long since induced the English collectors to consider the *Phalæna Chi* as a native of this country; but under this impression they mistook a very different insect for the *Chi* of Linnæus. Indeed the insect figured in Plate 83 of the work of Albin is no other than the common Sycamore Moth (*Phal. Aceris* of *Brit. Inf.*). It is therefore clear, this incautious reference has been productive of considerable misunderstanding, and that the *Phalæna Chi*, though really British, was not introduced with propriety as such, till we discovered it in Anglesea. We should however add, that among a number of insects found in Yorkshire, and communicated for our inspection by Mr. Rippon, of York, we found an insect very analogous, and apparently a variety of the same species, though of a darker colour than our Cambrian specimen, which in this respect accords extremely well with the Linnæan expression, "*alis canis*." It should be remarked, that Geoffroy, who describes *Phalæna Chi*, as an insect by no means uncommon in France, tells us, it varies much in size, and speaks of varieties that are reddish, and others

---

\* *Noctua Chiina*, *Jul. Septis*. *Haworth Prod. Lep. Brit.*





blackish \*, though they agree in the markings; and he further observes, that the female is of a more cinereous colour than the male, but has the same kind of spots on the wings.

Our figure of the larva is taken from a well-preserved specimen lately obtained by us from Germany as the larva of this species, and which agrees so exactly with the Linnæan description, and the figure in the plate of Roefel, that we cannot hesitate to admit it as such. The pupa delineated in our plate is also from the same source. The food of the *Phalæna Chi* is the columbine and the thistle.

---

“ Il y a des variétés de cette *Phalène*, qui sont rougeâtres et d'autres noirâtres : mais toutes ont les deux taches ronde et quarrée sur les aîlés.













# P L A T E CLXXXVII.

## PHALÆNA EXOLETA.

SWORD GRASS MOTH.

LEPIDOPTERA.

### GENERIC CHARACTER.

Antennæ taper from the base: wings in general deflected when at rest. Fly by night.

*Noctua.*

Antennæ in both sexes, like a bristle.

### SPECIFIC CHARACTER

AND

### SYNONYMS.

Thorax crested: wings lance-shaped, varied with grey and brown, a kidney-shaped spot in the middle: four white spots on the anterior margin.

PHALÆNA EXOLETA: cristata, alis lanceolatis convolutis fusco cinereoque nebulosis, punctis quatuor marginalibus albis. *Fab. Syst. Ent.* 617. 116 — *Spec. Inf.* 2. 239. 144.

---

The beautiful Caterpillar of this Moth is found on the Sword Grass in August. Though its trivial name might imply that it is peculiar to this

this plant, several others are mentioned by authors as proper food for it, amongst these are the Bell flower \*, Orach †, and common Pea. The Moth appears in May; and frequents marshy places.

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\* Campanula.

† Atriplex.











## P L A T E CCXIII.

## PHALÆNA PRÆCOX.

## LEPIDOPTERA.

## GENERIC CHARACTER.

Antennæ taper from the base: wings in general deflected when at rest. Fly by night.

## SPECIFIC CHARACTER

## AND

## SYNONYMS.

## NOCTUA.

Thorax crested: wings deflected: anterior pair ash-colour with two spots, and a short dash of red behind.

PHALÆNA PRÆCOX: cristata alis deflexis cineris bimaculatis: posticis fascia rufa abbreviata.—*Linn. Syst. Nat.* 2. 854. 174.—*Fab. Ent. Syst.* I. 3. p. 2. 97. 289.  
*Roef. Inf.* 1. phal. 2. tab. 51.

---

When the late Duchess of Portland honoured the scientific as well as practical part of Entomology with her patronage, her Grace discovered, and reared from the Caterpillar state, several species of the Phalæna tribe, not before known as natives of this country; and among the number of those may be enumerated this elegant species. The brood was found in one of the Portland isles.

Fabricius says the larva feeds on the thistle. The rarity of this creature induced us to depart from our usual method, and copy the larva and pupa from the plate in the works of Roefel, apprehending it would be particularly interesting to English naturalists in general, as that author alone has represented it in those states; and no collector that we are informed has met with it within the last fifteen years.











## P L A T E CXXVI.

## P H A L Æ N A R U M I C I S.

## B R A M B L E M O T H.

## L E P I D O P T E R A.

## G E N E R I C C H A R A C T E R.

Antennæ taper from the base. Wings in general contracted when at rest. Fly by night.

## \* N O C T U A.

Antennæ like a hair.

## S P E C I F I C C H A R A C T E R.

First wings grey, marked with pale black streaks and clouds, with an eye in the middle, and two white spots on the anterior margin. Second wings pale brown.

P H A L Æ N A R U M I C I S. N. cristata, alis deflexis cinereo fuscoque variis litura marginis tenuioris alba.—  
*Fab. Spec. Inf.* 2. 238. 143.

P H A L Æ N A R U M I C I S. spirilinguis cristata, alis deflexis cinereo bimaculatis, litura marginis tenuioris alba. *Linn. Syst. Nat.* 2. 852. 164.—  
*Fn. Sv.* 1200.

*Merian. Europ. tab.* 82.

*Alb. Inf. tab.* 32.

*Wilk. pap.* 26. *tab.* 3. *a.* 1.

*Degeer Inf.* 4. *tab.* 9. *fig.* 2.

---

The Caterpillar of this Moth are usually found on the Bramble, from which it has received its English name; it is not, however, wholly confined to that food, as we have fed it on grass and other plants indiscriminately put into its breeding-cage. It passes to the chrysalis state in September; the Fly appears in May.











# PLATE DLXII.

## PHALÆNA SIGMA.

DOUBLE SQUARE SPOT.

LEPIDOPTERA.

GENERIC CHARACTER.


Antennæ taper from the base : wings in general deflected when at rest : fly by night.

SPECIFIC CHARACTER

AND

SYNONYMS.

Wings purplish brown with pale bands, and a double square black spot in the middle.


NOCTUA SIGMA : cristata, alis deflexis, superioribus moschatinis  fusco nigro inscriptis. *Klem.* 2. p. 10 25.

NOCTUA SIGNUM : cristata alis maculis tribus fuscis : costa baseos cinerascens, thorace fusco antice brunneo. *Fabr. Mant. Inf. T.* 2. p. 154. n. 141.

NOCTUA SIGMA. *Knoch Beitr.* 3. p. 94. 10.

NOCTUA ATROSIGNATA. *Wiener Verz.* p. 78.

---

Found in the larva state in May and June, appears on the wing in August. The species is well distinguished by the character-like fuscous mark in the middle of the anterior wings, a kind of double mark, formed by the junction of two subquadrangular spots that unite together at their most contiguous angle, being a little oblique from each other. Some compare this mark to the Hebrew character , but it does not well agree with this; the simple appellation of double square spot is much more applicable.













# PLATE CCCXXXI.

## PHALÆNA DELPHINII.

PEASE-BLOSSOM MOTH.

LEPIDOPTERA.

### GENERIC CHARACTER.

Antennæ taper from the base: wings in general deflected when at rest. Fly by night.

### SPECIFIC CHARACTER

AND

### SYNONYMS.

Thorax crested. First pair of wings purple with two broad transverse whitish bars, second pair pale brown.

PHALÆNA DELPHINII: cristata alis deflexis purpurascens; fasciis duabus albidis, posticis obscuris. *Linn. Syst. Nat.* 2. 857. 138.—*Fab. Ent. Syst. T.* 3. p. 2. p. 90. *sp.* 267.  
*Geoff. Inf.* 2. 164. 109.  
*Merian. Eurasp.* 1. tab. 40.  
*Roef. Inf.* 1. *phal.* 2. tab. 12.  
*Panz. Fn. Germ.* 7. tab. 17.



The *Phalæna Delphinii* is extremely rare. A traditionary opinion seemed to prevail amongst the old collectors of English Insects;

that it had been taken in this country, but the fact was not clearly ascertained till within the last two years.

The late Dukes of Portland, it is confidently reported, once found a mutilated wing of some *Phalæna* hanging in a cobweb, which, from its appearance, was conjectured to have belonged to an individual of this species; but on such slender authority few were disposed to consider *P. Delphinii* as a native of Britain. From that period it remained a subject of dispute till the summer of 1799, when our worthy friend W. Jones, Esq. met with a fine specimen of it alive in his own garden at Chelsea; and thereby removed every doubt respecting it, as a British Species.

The larva feeds on the Larkspur, and is figured by Roefel together with the eggs and pupa; those figures we have copied in the annexed plate, as they render the history of this interesting Insect more complete than our limited information would otherwise permit. —The larva seems to bear some resemblance to those of *Phalæna Verbasci*, or Water Betony Moth; the colours are nearly the same, but the black spots in the former are more numerous.











# P L A T E   C C C X X X .

## P H A L Æ N A   A C E R I S .

S Y C A M O R E   M O T H .

L E P I D O P T E R A .

### G E N E R I C   C H A R A C T E R .

Antennæ taper from the base: wings in general deflected when at rest. Fly by night.

### S P E C I F I C   C H A R A C T E R

A N D

### S Y N O N Y M S .

Thorax crested: wings deflected, grey, undulated with black, and a black dagger-like mark at the base of the anterior pair.

P H A L Æ N A   A C E R I S : cristata alis deflexis canis nigro undatis, abdomine subtus basi brunneo. *Linn. Syst. Nat.* 2. 846. 137.—*Fn. Sv.* 1179.—*Fab. Ent. Syst. T.* 3. p. 2. p. 107. *sp.* 322.  
*Wilks pap.* 32. tab. 2. c. 6.  
*Reaum. Inf.* 1. tab. 34. fig. 11.  
*Frisch. Inf.* 1. tab. 5.

---

The larva of this species feeds on the Sycamore, it becomes a pupa late in August, and appears in the winged state in June.

Another

Another Moth very analogous to this species is known amongst English collectors by the name of Sycamore likeness ; it is exceedingly similar in its colour and marks, but is destitute of the small dagger-form black spot which is situated near the base of the anterior wings in *Phalæna Aceris*.











P L A T E    C C C X X X I V .

P H A L Æ N A   F L A V O C I N C T A .

G R E A T   R A N U N C U L U S   M O T H .

G E N E R I C   C H A R A C T E R .

Antennæ taper from the base : wings in general deflected when at rest. Fly by night.

S P E C I F I C   C H A R A C T E R

A N D

S Y N O N Y M S .

Thorax crested : wings deflected, margins dentated, first pair greyish brown, obscurely clouded and variegated with small orange-yellow spots.

P H A L Æ N A   F L A V O C I N C T A : cristata alis deflexis dentatis fusco cinereoque variis fulvo punctatis. *Fab. Ent. Syst.*

*T. 3. p. 2. p. 114. sp. 334.*

Noctua flavocincta. *Wien. Verz. 72. 2.*

*Rœf. Inf. 1. phal. 2. tab. 54. 55.*

The larva is supposed to feed on the black Cherry and Sloe ; on the latter of which we once found it. Its English name implies that it feeds also on some plant of the Ranunculus genus. In the winged state it is sometimes met with in gardens.

Another Insect analogous to this species has been named the small Ranunculus Moth.











# PLATE CCLXII.

FIG. I. I.

PHALÆNA ATRIPLICIS.

WILD ARRACH MOTH.

LEPIDOPTERA.

## GENERIC CHARACTER.

Antennæ taper from the base: wings in general deflected when at rest. Fly by night.

## SPECIFIC CHARACTER

AND

## SYNONYMS.

Thorax crested, anterior wings, brown, clouded and marked with undulated streaks, and a bifid yellow mark in the middle.

PHALÆNA ATRIPLICIS, cristata alis deflexis: anticis fusco nebulosis: litura media flava bifida. *Lin. Syst. Nat.* 2. 854. 173. *Fab. Ent. Syst. T.* 3. p. 95. *sp.* 282.  
*Roef. Inf.* 1. *phal.* 2. *tab.* 31.

---

This species is noticed by Harris and Berkenhout, as a native of Great Britain, under the trivial name of *Wild Arrach Moth*; we have ever considered it a local species. It is found in Cambridgeshire,

D

the



the Caterpillar in August, the Fly in September. The wil orach and common dock are its favourite food.

## FIG. II. II.

## P H A L Æ N A U M B R A T I C A.

## SHARK MOTH.

## S P E C I F I C C H A R A C T E R

## AND

## S Y N O N Y M S.

Thorax crested: wings lanceolate, greyish, striated longitudinally with pale black: a central ferruginous spot and two black dots.

P H A L Æ N A U M B R A T I C A: cristata alis deflexis striatis lanceolatis canis; macula centrali ferruginea; punctis duobus nigris. *Linn. Syst. Nat.* 849. 150. *Fn. Sv.* 1184.—  
*Fab. Ent. Syst. T.* 3. p. 122. 368.

Noctua lucifuga. *Wien. Verz.* 312. 11?  
*Roef. Inf.* 1. phal. 2. tab. 25.

The larva of *Phalæna Umbratica* is sometimes of a dirty brown, with spots of clay colour; it feeds on the sow thistle; changes into the Chrysalis state in May, and the Moth appear in June.









# P L A T E C L.

## FIG. I.

### PHALÆNA MARGINATA.

#### LEPIDOPTERA.

#### GENERIC CHARACTER.

Antennæ taper from the base. Wings in general deflexed when at rest. Fly by night.

#### NOCTUA.

Antennæ fetaceous.

#### SPECIFIC CHARACTER

#### AND

#### SYNONYMS.

Upper wings, yellow brown, with four streaks of red brown across each; two circles of the same colour in the middle; space next the exterior margin dark colour. Lower wings pale brown with a spot of black in the centre, and band of black next the posterior edge.

**NOCTUA MARGINATA:** Cristata, alis deflexis flavescens, strigis ferrugineis postice fuscus. *Fabricius Spec. Inf.* 2. 230. 108.—Mant. *Inf.* 2. p. 166. n. 209.

**Tabellar.** Verz. II. heft, p. 41. n. 59. *Noctua rutilago cristata* alis deflexis flavis, ferrugineo strigosis fasciaque postica fusca; posticis pallidis limbo nigro.

**Berliner.** Mag. 3. Struct. p. 294. n. 41.

*Phalæna Umbra.* Die Zimmetmotte.

**Gesenius handb.** p. 162. n. 77. *Phal. Noct. Umbra.* Die Zimmetmotte.

**DE VILLIERS** ent. *Linn.* 2. p. 258. n. 280. *Phal. Noctua Marginata.* la Bordure.

*Phalæna Marginata.* Klemann's. *Insecten Geschichte, &c.*

Kurnberg, 1792. Vol. 2. pl. 7. fig. 6. 7. 8.

The Synonyms of this rare Insect have been more minutely collected, than is common in the descriptions of this work, as it has been generally considered an undescribed species. Mr. Crow, of Feversham, who has enriched the collections of several gentlemen in London, with many curious Insects, met with two or three specimens of this Moth, and among others sent one to Mr. Bentley, a collector in London, a few years since. I have to acknowledge being favoured with this Insect by LORD WILLIAM SEYMOUR; his Lordship met with it in Wiltshire.

*Fabricius*, in the *Species Insectorum*, has made a very considerable error; and which it is proper to notice in this place, "*Noctua Marginata*, native of America," and described from the Collection of Dr. Hunter, occurs in page 216. spec. 40; and again in page 230. spec. 108, "*Noctua Marginata* a native of Europe," the present specimen. The former he has indeed changed to "*Noctua Marginella*" in his last work, *Entomologiæ Systematicæ*, but without the slightest notice of the first mistake, or any reference to the *Species Insectorum*.

It appears to be a native of Germany by the last work published by *Klemann*, though perhaps it is very rare in that country as it is given in a supplementary series of plates to his work, and his plates are but a supplement of the more rare Insects, not figured in *Roefel's* publications.







PHALÆNA AURANTIAGO.

ORANGE MOTH.

LEPIDOPTERA.

PHALÆNA.

*SPECIFIC CHARACTER.*

Upper wings orange colour with spots, waves, and streaks of brown; several minute white spots along the anterior margin. Body and lower wings cream colour, with a pale wave in the middle of the latter.

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This is certainly a non-descript. *T. Marham, Esq. T. L. S.* has described it in his manuscript notes under the specific name *Aurantiago*.

The specimen from which the figures in the annexed plate are copied was found on an oak in Richmond Park, in June, 1793. The under-side as well as upper-side is shewn in the plate.











THE  
NATURAL HISTORY  
OF  
BRITISH INSECTS.

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PLATE DV.  
PHALÆNA TYPICOIDES.

SCARCE GOTHIC MOTH.

LEPIDOPTERA.

*GENERIC CHARACTER.*

Antennæ taper from the base: tongue spiral: wings in general deflected when at rest. Fly by night.



2

P L A T E - D V.

SPECIFIC CHARACTER

AND

SYNONYMS.

PHALÆNA TYPICOIDES. Wings incumbent, varied fuscous and reddish, with white streaks: posterior pair whitish with fuscous border.

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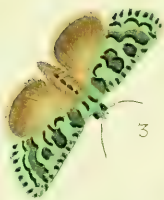
This is an insect of large size, and elegant appearance, and is generally esteemed among collectors in Britain on account of its rarity. It nevertheless occurs sometimes in abundance in particular situations, as for example in some parts of Yorkshire, and also in Devonshire. In the latter County at Knowle near Kingsbridge Mr. Montagu takes it in considerable plenty in his own garden throughout the summer. The same species inhabits Germany.

The transformations of this curious Moth are altogether unknown.









# P L A T E CCXXIII.

## FIG. I.

### PHALÆNA DERASA.

#### BUFF ARCHES MOTH.

#### LEPIDOPTERA.

#### GENERIC CHARACTER.

Antennæ taper from the base: wings in general deflected when at rest. Fly by night.

#### SPECIFIC CHARACTER

#### AND

#### SYNONYMS.

Crested: anterior wings buff colour, with small arched markings.

NOCTUA DERASA: cristata, alis deflexis, anticeis supra decorticatis.

*Fab. Syst. Ent.* 609. 80.—*Spec. Inf.* 2. 229. 103.—

*Ent. Syst.* 3. p. 2. 85. 250.

Phalæna derafa. *Linn. Syst. Nat.* 2. 851. 158.

Phalæna pyritoides. *Naturf.* 2. tab. 1. fig. 7. (mas).

Borkhausen, *enr. Schmett.* 4. T. n. 281, p. 657.

Die Himbeerule. Der Wifchflügel. *Panz. Faun. Inf. Germ.*

A rare species, is found in the moth state early in August.

The larva of this phalæna is unknown to us, and has neither been figured or described in any of the entomological works recently published. The notes of Harris are not altogether satisfactory; he mentions the time of its changing from the caterpillar to the pupa, but has given no figure or description of either. The entomologists of Germany, where the moth is not scarce, seem unacquainted with its metamorphosis. Fabricius, the latest writer on the subject, has described only the perfect insect.

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## FIG. II.

## PHALÆNA TRAGOPOGINIS.

## GOAT'S-BEARD MOTH.

## LEPIDOPTERA.

## PHALÆNA.

## SPECIFIC CHARACTER

## AND

## SYNONYMS.

Anterior wings dark brown, with three approximate black dots in the middle, posterior pair livid.

NOCTUA TRAGOGNIS: crista, alis deflexis, anticis fuscis, punctis nigris tribus approximatis, posticis lividus. *Fab. Syst. Ent.* 615. 107.—*Spec. Inf.* 2. 237.—*Ent. Syst.* 3. p. 2. 112. 336.

Phalæna Tragopoginis. *Lin. Syst. Nat.* 2. 855. 177.—*Fn. Sv.* 1189.







*Phalæna* antennis filiformibus, alis deflexis fuscis nitidis, punctis tribus centralibus nigris, capite flavo. *Degeer Inf. Verf. Germ.* 2. 1. 303. 10. *tab.* 7. *fig.* 15.

---

Found on the Goat's beard, Spinach, and Docks.—Our specimen was taken in June.

---

## FIG. III.

## PHALÆNA LICHENES.

## LIVER-WORT MOTH.

## LEPIDOPTERA.

## PHALÆNA.

## SPECIFIC CHARACTER

## AND

## SYNONYMS.

Thorax crested : anterior wings greenish, varied with black marks : beneath fuscous.

NOCTUA LICHENES : cristata, alis deflexis : anticis viridibus, maculis variis atris, subtus fuscis. *Fab. Syst. Ent.* 614. 102.—*Spec. Inf.* 2. 235. 127.—*Ent. Syst.* 3. p. 2. p. 104. 312.

Noctua glandifera.. *Wien. Verz.* 70. 2.

We have found this species against walls on which the *Lichen fusco-ater* was growing. The larva is supposed to feed on plants of that genus. One specimen was found in October, another early in the spring, from which we conclude there must be two broods of them in the year.







2



L. 22



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2



P L A T E CCXXX.

FIG. I.

PHALÆNA MAURA.

OLD LADY MOTH.

LEPIDOPTERA.

GENERIC CHARACTER.

Antennæ taper from the base : wings in general deflected when at rest. Fly by night.

SPECIFIC CHARACTER

AND

SYNONYMS.

Thorax crested : wings incumbent, exterior margins dentated, ash-colour, varied with black : margin beneath white.

NOCTUA MAURA cristata, alis incumbentibus dentatis, cinereo nigroque variis, subtus margine albo. *Fab. Syst. Ent.* 604. 61.—*Spec. Inf.* 2. 224. 81.—*Ent. Syst.* 3. p. 2. 63. 174.

*Phalæna maura* spirilinguis cristata, alis depresso dentatis fasciis duabus nigris, inferioribus nigris, fascia alba. *Linn. Syst. Nat.* 2. 843. 124.

*Phalæna Lemur* *Naturf.* 6. tab. 5. fig. 1.  
*Schæff. Icon.* tab. 1. fig. 5. 6.

This grave Moth appears in the month of August : it frequents old houses in evenings.—From its dingy appearance it is usually called the Old Lady.



## FIG. II.

## PHALÆNA LUCIPARA.

SCARCE ANGLE SHADES MOTH.

LEPIDOPTERA.

PHALÆNA.

## SPECIFIC CHARACTER

AND

## SYNONYMS.

Crested: wings deflected, cinereous, and glossy, a broad fuscous band in the middle.

NOCTUA LUCIPARA cristata, alis deflexis cinereo nitidis, fascia media lata fusca. *Fab. Spec. Inf.* 2. 233. 121.—  
*Ent. Syst.* 3. p. 2. p. 99. 244.

*Phalæna lucipara* spirilinguis cristata, alis purpurascens lucidis, fascia nigra, stigmatе postico flavo. *Linn. Syst. Nat.* 2. 857. 187.—*Fn. Sv.* 1201.

---

The common Angle-shades Moth, (*Phalæna Meticulosa*) is figured in a former part of this Work. *Phalæna Lucipara* is an Insect nearly allied to it; but is far more scarce: we have only met with the Specimen figured in the annexed Plate.—The Larva is supposed to feed on the internal substance of Willows. The Fly has also been observed among those trees,









# PLATE CCCCXXXIX.

## PHALÆNA OLEAGINA.

GREEN BRINDLED DOT MOTH.

### GENERIC CHARACTER.

Antennæ tapering from the base : wings in general deflected when at rest. Fly by night.

### SPECIFIC CHARACTER

AND

### SYNONYMS.

Wings green-brown with two white spots, the anterior one pupillated, posterior largest.

PHALÆNA OLEAGINA : alis viridibus fusco subundatis : maculis duabus albis anteriore pupillata ; posteriore majore.  
*Wien. Schmetterl. p. 59. n. 2.*

GREEN BRINDLED DOT. *Haw. Lep. Brit. p. 120. n. 70.*

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We accidentally met with an individual of this species on the wing about twilight one summer's evening\* near Fishguard in Pembroke-shire, South Wales. It occurred among a number of other insects of the Noctua and Bombyx families by the side of the low hedges which divide the fields and meadows at a short distance from the town. This is the only specimen we have seen British.

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\* In the month of July 1800.

The larva, as described by Fabricius, is quadridentated: behind cinereous with black and red indentations, and the collar red dotted with black.











# PLATE CCCCLIII.

## FIG. I.

### PHALÆNA AUROSIGNATA.

SCARCE PURPLE GOLDEN Y MOTH.

LEPIDOPTERA.

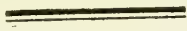
GENERIC CHARACTER.

Antennæ taper from the base ; wings in general deflected when at rest : fly by night.

*Noctua.*

SPECIFIC CHARACTER.

PHALÆNA AUROSIGNATA. Anterior wings purplish varied with fuscous : in the middle a vermicular golden character irregularly lobate at one extremity.



This is an extremely scarce, and we believe, undescribed species. In its general appearance this curious insect is nearly allied to the *Noctua interrogationis* of Fabricius ; it is as large as the Common Y Moth (*Noctua gamma*) : the anterior wings are tinged with purple, and the flexuous mark in the middle of each golden. The habits of this species are unknown.

## FIG. II.

## PHALÆNA LEUCONOTA.

WHITE-BACKED MOTH.

*SPECIFIC CHARACTER.*

PHALÆNA LEUCONOTA. Fuscous : thorax, back part of the anterior wings, and transverse band; white : abdomen and posterior wings whitish.



A single specimen of this elegant and strikingly singular Phalæna, occurs in the cabinet of the late Mr. Drury ; the figure in the annexed plate represents it in its natural size, and it is the only example of the species we have seen.











# PLATE CCCCLVIII.

## PHALÆNA GRAMINIS.

ANTLER MOTH.

GENERIC CHARACTER.

Antennæ tapering from the base : wings in general deflected when at rest. Fly by night.

*Bombyx.*

SPECIFIC CHARACTER

AND

SYNONYMS.

Wings brown, with a trifurcated whitish line, and dot.

PHALÆNA GRAMINIS : alis griseis : linea trifurca punctoque albidis.

*Linn. Fn. Succ.* 1140.—*Act. Stockh.* 1742. p. 40.  
t. 2.

*Fab. Spec. Inf.* 2. p. 204. n. 148.

—— *Syst. Ent.* 2. 586. 106.

*Frisch inf.* 10. t. 21.

*Noctua tricuspis* *Hüb. Schmet.* 3. t. 60. fig. I.

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This insect obtained the name of “*Antler Moth*” among the old collectors, in allusion to the trifurcated whitish mark on the anterior wings, which bears some resemblance to the antler of a stag. In this country the species is very uncommon; in some other parts of Europe on the contrary it is exceedingly abundant, and as it feeds on  
grafs

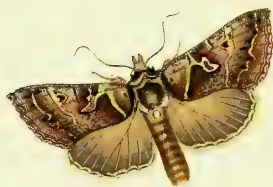
grafs is excessively destructive. The ravages committed in the space of a single year by this Insect in the Swedish pastures has been estimated at a clear loss of a hundred thousand ducats.

The larva is smooth, and dusky, with a dorsal yellow stripe, and another of the same colour on the sides. It is found at the roots of grafs; the winged insect in woods.









# PLATE CCCCXII.

## PHALÆNA FLEXUOSA.

YORKSHIRE Y MOTH.

LEPIDOPTERA.

GENERIC CHARACTER.

Antennæ gradually tapering from the base to the tip: wings in general deflected when at rest. Fly by night.

\* *Noctua*.

SPECIFIC CHARACTER.

**NOCTUA FLEXUOSA.** Anterior wings reddish-grey varied with sub-ferruginous: in the middle a flexuous white streak inclosing a pale lobiform spot.

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---

This species of *Noctua* is described upon the authority of an unique British specimen in the cabinet of Mr. Drury, that has not been hitherto described by any writer. It was taken in Yorkshire, and has been denominated among English collectors to whom the circumstance was known, the Yorkshire Y Moth. We name it *Flexuosa* from the whitish flexuous line, which originates at the inner edge of the first wings near the base, and passing from thence  
in



in a circuitous direction to the middle of the wing, encircles a small lobe-shaped spot of a pale clay colour; in other respects this species is not unlike the common Y Moth *Phalæna Interrogationis*, but in this very striking character it is totally distinct.

Our *Noctua Flexuosa* is very different from either of the analogous species, except that above mentioned; neither does it accord with any others described in foreign entomological works with which we are acquainted. The figures which represent it both in an incumbent posture, and with the wings expanded, are sufficiently correct to render any further description of this interesting insect unnecessary.









## P L A T E   C C C X L V I I .

## F I G .   I .

PHALÆNA APRILINA,  
SCARCE MERVEILLE DU JOUR MOTH.

## G E N E R I C   C H A R A C T E R .

Antennæ taper from the base. Wings in general deflexed when at rest. Fly by Night.

## S P E C I F I C   C H A R A C T E R

A N D

## S Y N O N Y M S .

Thorax crested. Wings deflexed, green : a black mark and transverse band ; and a single row of black triangular dots near the apex.

PHALÆNA APRILINA : cristata alis deflexis viridibus : macula fasciaque atris apice punctorum trigonum serie unica. *Fab. Ent. Syst. T. 3. p. 2. p. 103. sp. 306.*

PHALÆNA runica *Linn.*

---

Linnæus has made some confusion between the two species of *Phalæna Aprilina* and *runica* in several of his works. In the last edition by Gmelin, our Insect stands as the *P. runica* ; and in the *Entomologia Systematica* of Fabricius, which we have in this instance preferred, it is the *Phalæna Aprilina*.

The

The English Entomologist is indebted to the assiduity of the late Dukes of Portland for the discovery of this extremely rare species in England. It feeds on the Oak.

---

## F I G. II.

## P H A L Æ N A P I N A S T R I.

## S P E C I F I C C H A R A C T E R

## A N D

## S Y N O N Y M S.

Thorax crested. Wings deflexed, blackish: oblique broad space along the exterior margin grey.

P H A L Æ N A P I N A S T R I: cristata alis deflexis nigris: margine tenuiori anguloque ani obscure cinereis. *Linn. Syst. Nat.* 2. 851. 160. *Fab. Ent. Syst. T.* 3. p. 2. p. 101. *sp.* 302.

---

Not so rare as the preceding but still much esteemed by the English Entomologist.—Feeds on the Pine.







FIG. III.

PHALÆNA GEMINA.

SPECIFIC CHARACTER.

First wings greyish brown, with two transverse broad bands and two connected white spots, and a minute dot in the middle.

PHALÆNA GEMINA: spirilinguis cristata, alis superioribus cinereo-fuscentibus, fasciis duabus strigosis maculisque duabus niveis intermediis. *Beckwith's paper transf. Linn. Soc. Vol. 2. p. 4.*

---

The larva is of a pale yellow with a red head. It feeds on the Poplar, and about the beginning of October encloses itself between two leaves, which it unites at the edges by means of many strong threads, and becomes a pupa. The Moth bursts forth about the end of May or beginning of June.











PLATE CCCLIV.

FIG. I.

PHALÆNA RUNICA.

COMMON MERVEILLE DU JOUR MOTH.

GENERIC CHARACTER

Antennæ taper from the base: wings in general deflected when at rest. Fly by night.

SPECIFIC CHARACTER

AND

SYNONYMS.

Thorax crested: first wings greenish with black marks; and a row of triangular spots behind.

PHALÆNA RUNICA: cristata alis deflexis: anticis virefcentibus, maculis variis atris, postice utrinque punctis trigonis. *Fab. Ent. Syst. Nat. T. 3. p. 2. p. 102. sp. 305.*

PHALÆNA APRILINA. *Linn. Syst. Nat. a Gmel, p. 2561. sp. 1123.*



The two black femicircles on the thorax and double row of triangular spots at the ends of the posterior wings, are mentioned as peculiar characters of this species; the latter is, however, liable to considerable variations, the spots being in general, crowded in a confused series, and forming an irregularly interrupted line. It may be easily distinguished from *Phalæna Aprilina* by its superior size, the colours are less vivid, and it is destitute of the broad transverse bar, which is conspicuous on the upper wings of *Phalæna Aprilina*.

The larva is smooth, of an ash colour with square brownish spots. It feeds on the Oak.

## FIG. II.

### PHALÆNA LUSORIA.

#### SPECIFIC CHARACTER

AND

#### SYNONYMS.

Thorax crested: wings incumbent, greyish; a black lunar mark, with a small approximate point in the middle of the first pair, and triangular spot of the same colour on the anterior part of the thorax.

*PHALÆNA LUSORIA*: cristata alis incumbentibus glaucis: lunula thoraceque antice atris. *Linn. Syst. Nat.* 2. 831. 74.—*Fab. Ent. Syst.* T. 3. p. 2. p. 64. sp. 179

*Phalæna Lusoria*: alis primoribus glaucis: lunula thoraceque anteriorius ferrugineis. *Gmel. Linn. Syst. Nat.* T. 1. p. 5. p. 2441. sp. 74.

From the collection of Mr. Francillon.









P L A T E   C C C X X V I I .

F I G. I.

P H A L Æ N A   L E P O R I N A .

MILLER OF MANSFIELD MOTH.

LEPIDOPTERA.

G E N E R I C   C H A R A C T E R .

Antennæ taper from the base : wings in general deflected when at rest. Fly by night.

S P E C I F I C   C H A R A C T E R

A N D

S Y N O N Y M S .

Wings deflected, white, sprinkled with ramose black spots: abdomen immaculate.

P H A L Æ N A   L E P O R I N A : alis deflexis albis : punctis ramosis, abdomine immaculato. *Linn. Syst. Nat.* 2. 838. 9. *Fn. Sv.* 1176.—*Fab. Ent. Syst. T.* 3. p. 1. p. 453. 144. *Degeer. Inf.* 1. tab, 12. fig. 10. 11. 17. *Fuesl. Magaz.* 2. tab. 1. fig. 1—3.

We cannot account for the very absurd name English Aurelians have given to this Insect. It probably originated in some trivial event, which has been long since forgotten, but as the Insect will be

better known by that name than any other we could adopt, it is thought most advisable to retain it.

This Moth is uncommonly scarce in Great Britain. The larva is of a pale or greenish white colour with three longitudinal stripes of brown and a few black bars across. It feeds on the Willow and Alder. Four of those larvæ were taken in the wood of Darent, 1793 : and one of them was reared to the winged state.

FIG. II.

PHALÆNA ALNI.

SPECIFIC CHARACTER

AND

SYNONYMS.

Thorax crested: anterior wings brown with two broad spaces of grey, divided by a transverse dark bar, and a kidney-shaped spot in the middle: posterior wings whitish with a marginal row of brown spots, and pale brown apex.

PHALÆNA ALNI: cristata alis deflexis fuliginosis: areis duabus cinerascens prior puncto marginali nigro.  
*Linn. Syst. Nat.* 2. 845. 134.—*Fab. Ent. Syst.*  
*T.* 3. *p.* 2. *sp.* 89.

Noctua Degener. *Wien. Verz.* 70. 4.—*Degeer. Inf.* 1. *tab.* 11.  
*fig.* 25. 28.

One of the rare English species of *Phalæna* known amongst collectors by the general name of Portland Moths, having been first discovered and introduced to notice as natives of this country by the late Dutchess Dowager of Portland.

FIG.







## F I G. III.

## P H A L Æ N A D I P S A C E A.

## S P E C I F I C C H A R A C T E R

## A N D

## S Y N O N Y M S.

Thorax smooth: anterior wings pale clay colour, with a broad brown ramose bar across: posterior pair black, with an irregular pale oblique bar, and double spot of the same near the posterior margin.

P H A L Æ N A D I P S A C E A: lævis alis deflexis pallidis: fascia lata fusca, posticis albo nigroque variis. *Lin. Syst. Nat.* 2. 856. 185.—*Fab. Ent. Syst. T.* 3. p. 2. p. 33. *sp.* 83.  
*Wien. verz.* 89. 3.

---

Hitherto considered as a scarce or at least very local species. Dr. Latham found it in great abundance in a clover field near Dartford, Kent. The larva is described; it is red with broken or interrupted white lines and a cinereous head. It feeds on the *Centaurea*, Plantain and *Tragopogon*.











2

3

P L A T E     C C C X L .

F I G. I.

P H A L Æ N A   L A P P Æ .

T H E   B U R D O C K   M O T H .

*G E N E R I C   C H A R A C T E R .*

Antennæ taper from the base: wings in general deflected when at rest. Fly by night.

*S P E C I F I C   C H A R A C T E R .*

First wings ferruginous: a broad yellow clouded bar with three yellow eye-shaped spots across the middle: a yellow spot at the base, and another at the apex: second wings pale, with an obscure transverse streak.

P H A L Æ N A   L A P P Æ : alis ferrugineis: basi stigmatibus fascia maculaque apicis flavis fusco-nebulosis, posticis pallidis striga obscura. *Marsh. Mfs.*

---

It feeds on the Burdock.



## FIG. II.

## PHALÆNA CITRINA.

## SPECIFIC CHARACTER.

Thorax crested: first wings yellowish, with two transverse bands of brown; the interior one interrupted and enclosed between two irregular whitish streaks.

PHALÆNA CITRINA alis flavescens, lineis duabus irregularibus transversis albidis, fasciis duabus fuscis, interiore interrupta.

---

Ernst, in the *Papillons de l'Europe*, fig. 278. gives the figure of a *Phalæna* not very dissimilar to our species, and probably a mere variety of it. Under this idea we have named it *Citrina*, from the French name *La Citrinne*, adopted by Ernst, for it does not appear to have been either figured or described by any other author.

This choice and beautiful Insect is one of those discovered by the late Dukes of Portland, and is in the Cabinet of Mr. Francillon.

---

## FIG. III.

## PHALÆNA CLAVIS.

## SPECIFIC CHARACTER.

First wings reddish, with a paler dash along the middle, ending near a kidney eye-shaped mark and a contiguous white spot. An interrupted dark mark at the base.

PHALÆNA





PHALÆNA CLAVIS: alis fusco cinereis linea media punctoque albis,  
lineola interrupta baseos maculisque fuscis.

---

Several varieties of this Insect appear to have been figured in the work of Ernst already quoted, but none of them agree so precisely with our specimen as to permit us to refer to his plates.—We believe it is not described by Fabricius, or any other systematic author.













## P L A T E   C C C X L V .

## F I G .   I .

## P H A L Æ N A   G R A N D I S .

## G R E Y   A R C H E S   M O T H .

## G E N E R I C   C H A R A C T E R .

Antennæ taper from the base. Wings in general deflexed when at rest. Fly by night.

## S P E C I F I C   C H A R A C T E R .

Wings whitish, variegated with black, and waved or arched transverse streaks. A large eye-shaped spot in the middle, and a black character in the posterior angle.

P H A L Æ N A   G R A N D I S : alis albicantibus nigro-varie undatis : stigmatibus magnis subocellaribus, litura prope angulum posticum nigrum.

---

An Insect well known amongst English collectors by the name of Grey Arches Moth, from the characteristic arched double lines across the superior wings. It is altogether unnoticed by Linnæus or Fabricius, though figured by Sepp. vol. ii. tab. 27. It is esteemed a scarce species in this country.

## F I G. II. III.

## P H A L Æ N A S P I N U L A.

## S P E C I F I C C H A R A C T E R.

Wings variegated brown and grey, with obscure transverse bars. Three distinct black pointed characters near the apex.

P H A L Æ N A S P I N U L A : alis fusco cinereis maculis strigisque obscuris lituris tribus acutiusculis distinctis nigris ad apicem.

---

The specimens, *fig. 2* and *3*, appear at the first view two very distinct Insects; yet on the most attentive comparison of the characteristic marks, we are inclined to consider them as the two sexes of the same species, notwithstanding the dissimilarity of their colours in general. The kind represented at *fig. 2*, and which from its setaceous antennæ is evidently the female, has been placed in English cabinets as a species somewhat analogous to the *Phalæna Exoleta*, or Sword-blade Moth, under the trivial appellation of the *scarce* Sword-blade Moth. The other, which from the pectinated structure of its antennæ, is obviously the male, is equally uncommon.

We have observed several figures of this species different only in colour in the works of Ernst, and one in particular nearly corresponding with that represented in the annexed plate at *fig. 2*, which he calls *spinula*; a name we have ventured to adopt, as the Insect is neither described by Linnæus nor Fabricius.







3



2



# P L A T E CCCLII.

## FIG. I.

### PHALÆNA DIVES.

#### BROCADE MOTH.

#### GENERIC CHARACTER.

Antennæ taper from the base: wings in general deflected when at rest. Fly by Night.

#### SPECIFIC CHARACTER

#### AND

#### SYNONYMS.

Wings brown: base, central spot and broad transverse bar behind grey; a black line at the base, a bidentated dark line along the apex, and a black mark near the posterior margin.

PHALÆNA DIVES: alis fuscis: basi stigmatibus fasciaque postica bidentata cinereis, linea baseos alteraque posteriori nigris.

An undescribed species, known by the English name of Brocade Moth.

## FIG. II.

### PHALÆNA TRIMACULA.

#### SPECIFIC CHARACTER.

Wings cinereous clouded with brown; base, apex and a broad transverse bar across the middle white.

PHALÆNA



PHALÆNA TRIMACULA: alis cinereis nigro-nebulosis: basi pal-  
lidiore, fascia lata apiceque albis.

---

This seems to be no other than the Bombyx trimacula of the Vienna catalogue, *Wien. Verz.* 59. No. 4. and the B. trifascia of Esper, p. 242. t. 46. fig. 1—2; a species unnoticed in the Entomologia Systematica of Fabricius.

This is one of the rare Insects discovered by the late Dukes of Portland.

---

### FIG. III.

#### PHALÆNA FLAVICORNIS.

YELLOW-HORNED PHALÆNA.

SPECIFIC CHARACTER

AND

SYNONYMS.

First wings greyish tinged with yellow, and marked transversely with three black streaks: antennæ yellow.

PHALÆNA FLAVICORNIS: alis primoribus cinereis: frigis tribus  
atris, antennis luteis. *Fn. Sv.* 1204.—*Linn.*  
*Syst. Nat. a Gmel. T. 1. p. 5. p. 2575. sp. 182.*  
—*Fab. spec. Inf. 2. p. 238. n. 140.*

---

A scarce Moth, said to feed on fruit-trees.—Cabinet of A.  
M'Leay, Esq.









# PLATE CCCLX.

FIG. I.

PHALÆNA ERICÆ.

TRANSVERSE-STREAK HEATH MOTH.

## GENERIC CHARACTER.

Antennæ taper from the base: wings in general deflected when at rest. Fly by night.

## SPECIFIC CHARACTER.

Anterior wings brown, with undulated streaks, spots, and little lines of white: posterior wings pale.

PHALÆNA ERICÆ: alis anticis fuscis: strigis duabus undatis maculis ordinariis lineolisque albis, posticis pallidis.

---

A non-descript species of the noctua family, and very rare. Found on heaths, and hence named by us Ericæ.

## F I G .   I I .

## P H A L Æ N A   L I N E O L A .

S H O R T - L I N E   M O T H .

## S P E C I F I C   C H A R A C T E R .

Antennæ wings ferruginous grey, with undulated streaks : a small oblique line in the middle, and a row of brown points along the exterior margin.

P H A L Æ N A   L I N E O L A : alis anticis griseo-ferrugineis : strigis undatis  
lineola obliqua in medio punctisque postice  
fuscis.

---

More frequent than the preceding species, and seems to be figured in the works of Ernst and Esper, but certainly is not described by any systematic author.

The colour varies in different specimens from ferruginous to greyish or livid colour.







FIG. III.

PHALÆNA MAPPA.

MAP-WING SWIFT MOTH.

SPECIFIC CHARACTER.

Wings brown, with large irregular waved livid marks, and four distinct whitish dots near the apex.

PHALÆNA MAPPA: alis fuscis: lituris magnis irregularibus lividis punctisque quatuor postice albidis.

---

A Moth of the *Hepialus* tribe, a new genus in the Fabrician System, including only ten species, neither of which agrees with our Insect; there is also every reason to apprehend it is not described by any other Author.

In the Linnæan System, this Insect can only be regarded as a family of the *Phalæna* tribe. The English collectors have denominated this family Swifts, as noticed already in the descriptions of *Humuli* and *Hecta*, (plate 274. fig. 1, 2, 3.)—The present Insect may be considered as one of the rarest English undescribed species, and the mazy windings of the numerous spots and undulations on the anterior wings, immediately suggest the appropriate specific name of *Mappa*.











P L A T E CCCLVII.

FIG. I.

PHALÆNA BENTLEIANA.

GENERIC CHARACTER.

Antennæ taper from the base : wings in general deflected when at rest. Fly by Night.

SPECIFIC CHARACTER.

Reddish brown, with numerous streaks and dots of silvery yellow.

PHALÆNA BENTLEIANA : alis fusco ferrugineis : strigis punctisque numerosis argenteo-flavis.

---

As no Insect has yet appeared to record the memory of that indefatigable collector of English Insects, Mr. Bentley, we are induced to assign his name to this beautiful and hitherto nameless Species—It is extremely scarce.

---

FIG. II.

PHALÆNA ILICANA.

SPECIFIC CHARACTER.

Anterior wings greyish brown, with brown spots, a solitary black spot in the middle.

PHALÆNA



PHALÆNA ILICANA : alis anticis fusco-cinereis : punctis fuscis ;  
centrali solitario atro. *Fab. Ent. Syst. 3. b. 266.*  
100.

---

Fabricius describes this as an English Insect. It is rare, and not hitherto figured.

---

FIG. III.

PHALÆNA BIFASCIANA.

*SPECIFIC CHARACTER.*

Anterior wings testaceous, with two whitish bands, and four distinct undulated streaks and spots of black.

PHALÆNA BIFASCIANA : alis anticis testaceis, fasciis duabus  
albidis, strigis quatuor undatis maculisque nigris.

---

A very uncommon Insect, and not noticed by any author.





## F I G. IV.

P H A L Æ N A L E E A N A,

S P E C I F I C C H A R A C T E R

A N D

S Y N O N Y M S.

Wings pale, yellowish, with a brown spot in the middle.

P H A L Æ N A L E E A N A : alis pallidis : macula centrali fusca.

*Gmel. Linn. Syst. Nat. p. 2497.*

*Fab. Spec. Insect. 2. p. 276. n. 2.*

---

Taken in June and July. Not uncommon.

















